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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,000	06/12/2008	Deyang Hou		4587

45462 7590 04/11/2012  
QUANTLOGIC CORPORATION  
5111 AVONDALE DRIVE  
SUGARLAND, TX 77479

EXAMINER
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JONAITIS, JUSTIN M

ART UNIT	PAPER NUMBER
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3752

MAIL DATE	DELIVERY MODE
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04/11/2012

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/597,000	<b>Applicant(s)</b> HOU, DEYANG	
	<b>Examiner</b> JUSTIN JONAITIS	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 5) ☒ Claim(s) 1-12,14-16 and 18 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-12,14-16 and 18 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 5/22/2011 and 6/17/2010 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.  | 6) <input type="checkbox"/> Other: ____.                          |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/26/2011 has been entered.

### ***Drawings***

2. The drawings were received on 5/22/2011. These drawings are not acceptable. Specifically, the drawings disclose new figures 5-10 which further disclose embodiments of the apparatus which were disclosed in claims dated 9/24/2010 and subsequently rejected under 112 first paragraph as a new matter rejection, as they defined features that are not seen or described in the originally presented claims or the originally filed figures 1-4. Therefore figures 5-10 and any limitations present only in figures 5-10 are new matter.

Therefore the figures still remain deficient in showing a diverging curved surface of claim 6, the conical surface with 2 conical surfaces of claim 4, a plurality of multi-jet orifices being on the conical surface of claim 8, as well as the various orifice shapes, the variable circular aperture of claim 15, diagrams of flow during low to medium pressure and diagrams of flow during high pressure of claim 15, and the system with fluid as the driving means of claim 20, and the solenoid or piezo actuator of claim 22.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the diverging curved surface of claim 6, the conical surface with 2 conical surfaces of claim 4, a plurality of multi-jet orifices being on the conical surface of claim 8, as well as the various orifice shapes, the variable circular

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aperture of claim 15, diagrams of flow during low to medium pressure and diagrams of flow during high pressure of claim 15, and the system with fluid as the driving means of claim 20, and the solenoid or piezo actuator of claim 22. must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Specifically with respect to the figures filed 5/22/2011, figures 5, 6, 7, 8b, 10c, and 10d are all new matter issues

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Election/Restrictions***

4. Newly amended claims 1 and 2 and all claims which depend on them directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The invention as originally claimed and described by figures 1 -4 does not disclose any

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multijet-orifices located underneath the conical surface wherein the conical surface is specifically an inner conical surface.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Therefore all matter disclosed by the claims must be directed toward the features disclosed by figures 1-4.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-12, 14-16, and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically the 1 and 20 conventional multijet-orifices being distributed underneath or on the conical surface (where the conical surface is defined as an interior conical surface) is not a feature disclosed by originally presented figures 1-4. Figures 5-10 were filed on 5/22/2011 in an attempt to disclose the claim limitations however these figures are not acceptable for the reasons disclosed above.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-12, 14-16, and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

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applicant regards as the invention. Specifically independent claims 1 and 2 both use the terminology "inner conical surface (C)" to define the conical surface (C) noted in figure 2. However the conical surface (C) in the figures, although recessed, is a bottom surface of the apparatus and is not actually internal to the apparatus. Further with respect to claims 1 and all claims which depend on claim 1, its unclear how the conical surface can be the bottom surface of the apparatus but still has channels disposed underneath it.

9. Further with respect to claim 2 and any claims which depend on it, if the multi-jet orifice channels are distributed **on** the conical surface, in a manner similar to what's depicted in applicant's not accepted figure 5 then the surface itself is no longer a conical surface.

### ***Response to Arguments***

10. Applicant's arguments with respect to claims 1-12, 14-16, and 18 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection. Specifically independent claims 1 and 2 are new matter issues disclosing limitations not disclosed by originally filed figures 1-4.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUSTIN JONAITIS whose telephone number is (571)270-5150. The examiner can normally be reached on Monday - Thurs 6:30am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JUSTIN JONAITIS/  
Examiner, Art Unit 3752  
3-2-2012  
/Jason J Boeckmann/  
Primary Examiner, Art Unit 3752